

Teacher Sheet 1



LAB ACTIVITY: LIFE IN A BAG

OBJECTIVES: Students will:

- ✚ Understand that atmospheric gases affect the temperature at the Earth's surface;
- ✚ Model the Earth's greenhouse;
- ✚ Analyze their data and

MATERIALS: For each group:

- ✚ 1 plastic garbage bag
- ✚ 2 thermometers
- ✚ Scissors
- ✚ Graph paper
- ✚ Tape
- ✚ Watch/clock with a second hand
- ✚ Paper/pencil
- ✚ Colored pencils



PROCEDURE:

1. Read the background information with the class and discuss in detail the role of the atmosphere in the greenhouse effect.
 - Explain that this activity only models the greenhouse effect using their bodies as the Earth and the plastic bag as the atmosphere.
2. Have students develop a hypothesis about the temperatures inside and outside of the plastic bag.
 - Have students write their hypotheses in the space provided on the **Student Sheet**.
3. Have students cut a hole in the sealed end of the plastic bag just big enough to fit their head through.

DO NOT CUT HOLES FOR ARMS!

Teacher Sheet 2

4. Students should then "put on" their plastic bag.
 - Group members are responsible for recording the temperature before the thermometer goes into the bag and the temperature every minute after that on the **DATA TABLE**.
 - The thermometer inside the bag should not directly touch their body.



5. Students should hold/tape the other thermometer on the outside of the bag and record the temperature from it the same way they did in step 4.
6. Temperatures should be recoded from both locations until the temperature stops changing.
7. After completing the **DATA TABLE**, student should create a graph of their data.
 - The X- axis should be labeled: **Time**
 - The Y-axis should be labeled: **Temperature**
8. Students should then complete the questions in the **ANALYSIS/COMPREHENSION** section.